MONTHLY WEATHER REVIEW.

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BOARD OF EDITORS { Mr. Horace E. Smith, Chief Clerk of Weather Bureau, Professors Henry A. Hazen, Thomas Russell, and Charles F. Marvin, and Mr. Edward B. Garriott, in charge of Review Room.

INTRODUCTION.

This REVIEW is based on reports for September, 1892, from 2,787 regular and voluntary observers. These reports are classified as follows: 162 reports from Weather Bureau stations; 46 reports from United States Army post surgeons; 1,869 monthly reports from state weather service and voluntary observers; 195 reports through the Central Pacific Railway Company; 485 marine reports through the co-operation of the Hydrographic Office, Navy Department; 30 reports from Canadian stations; marine reports through the "New York Herald Weather Service"; monthly reports from local services established in all states and territories; and international simultaneous observations. Trustworthy newspaper extracts and special reports have also been used.

CHARACTERISTICS OF THE WEATHER FOR SEPTEMBER, 1892.

From the upper Missouri valley to New Mexico the month was the warmest, and on the west Gulf coast and in the middle Rocky Mountain region it was the driest September on record. Drought prevailed generally over the middle and southern plateau and middle Rocky Mountain regions. The month was also very dry in the middle and lower Missouri valleys and in parts of Wisconsin and eastern Kentucky. The coolest weather of the month between the Mississippi River and the Rocky Mountains was noted from the 11th to the 15th. On the 11th temperature below freezing and heavy frost were reported in Wyoming; on the 12th frost injured vegetation in New Mexico; and on the 14th the frost line was carried to Arkansas. During the advance of a cool wave from the plateau region to the Atlantic coast from the 23d to the 27th the frost line was carried to Tennessee, western North Carolina, and western Virginia. From the 27th to the 29th a cool wave advanced from the Northwest to the Atlantic coast, attended on the 29th by frost in eastern North Carolina.

TEMPERATURE.

The month was warmer than usual, except in the middle Atlantic and middle and east Gulf states, and over western California. The greatest excess in temperature was noted over the eastern plateau region, on the northeast slope of the Rocky Mountains, and in the valley of the Red River of the North, where it was 4° to 5°, and the most marked deficiency was reported in the interior of the middle Gulf states, where the month was 2° to 3° cooler than the average September.

PRECIPITATION.

The rainfall was generally deficient. Small areas of excess are shown on the south Atlantic, middle Gulf, and extreme north Pacific coasts, and in the central lake region. The most marked deficiency was noted on the Texas coast, where it was 4.00 to 6.00 inches, and the deficiency was 2.00 to 3.00 inches on the middle Atlantic coast, in western Florida, and the lower Missouri valley. The greatest excess in monthly precipitation, 4.00 to 6.00 inches, was reported on the south Atlantic and extreme north Pacific coasts.

Snow fell in the mountains of western Wyoming and northeastern Oregon on the 23d and at Middletown, Conn., on the 27th. At Mount Washington, N. H., snow was reported on the 6th, 7th, 26th, and 27th.

STORMS.

Exceptionally severe local storms were not reported. The occurrence of local storms was noted most frequently in New York, Michigan, Wisconsin, Iowa, and Missouri, where they were reported on three to four dates. The widest distribution of storms is shown on the 10th, 25th, and 26th. On the 10th local storms were noted in New York, Ohio, Illinois, Wisconsin, Iowa, Missouri, and Kansas; on the 25th in New York, New Jersey, Delaware, Pennsylvania, Kentucky, and Michigan; and on the 26th in New England, with northwest gales over the middle Atlantic states.

ATMOSPHERIC PRESSURE (expressed in inches and hundredths).

The distribution of mean atmospheric pressure for September, 1892, as determined from observations taken daily at 8 a. m. and 8 p. m. (75th meridian time), is shown on Chart II by isobars.

The normal pressure for September is highest from the Atlantic coast between the 30th and 45th parallels westward to the middle Mississippi valley, where it is above 30.05, and it is above 30.00 on the north Pacific coast and over districts lying east of the middle and southern Rocky Mountain regions. The normal pressure is lowest in the lower Colorado valley, where it is below 29.85, and it is below 29.90 in the upper Saskatchewan valley and over the west part of the southern plateau region south of the 40th parallel.

In September there is usually an increase of pressure over the United States, except on the extreme north Pacific coast